

### ABSTRACT OF THE DISCLOSURE

A system and method for estimating an operating parameter of a vehicle such as the steering angle offset or body slip angle. The method includes providing a dynamic vehicle model which is valid when the yaw rate and slip angle of the vehicle are either constant or changing. The vehicle model is reformulated to allow for the direct estimation of the steering angle offset value and/or the body slip angle. Estimation of an operating parameter of the vehicle may also include the use of a model difference term which is defined by the difference between a value estimated using the model and a measured value. A method for filtering the steering angle offset value is also provided. The filtering method may utilize a variable filter coefficient which varies in response to changes in the dynamic behavior of the vehicle.